O. Ocean Pout *(Zoarces americanus)*

Table summaries are in
WP 1.1 pages 391-404

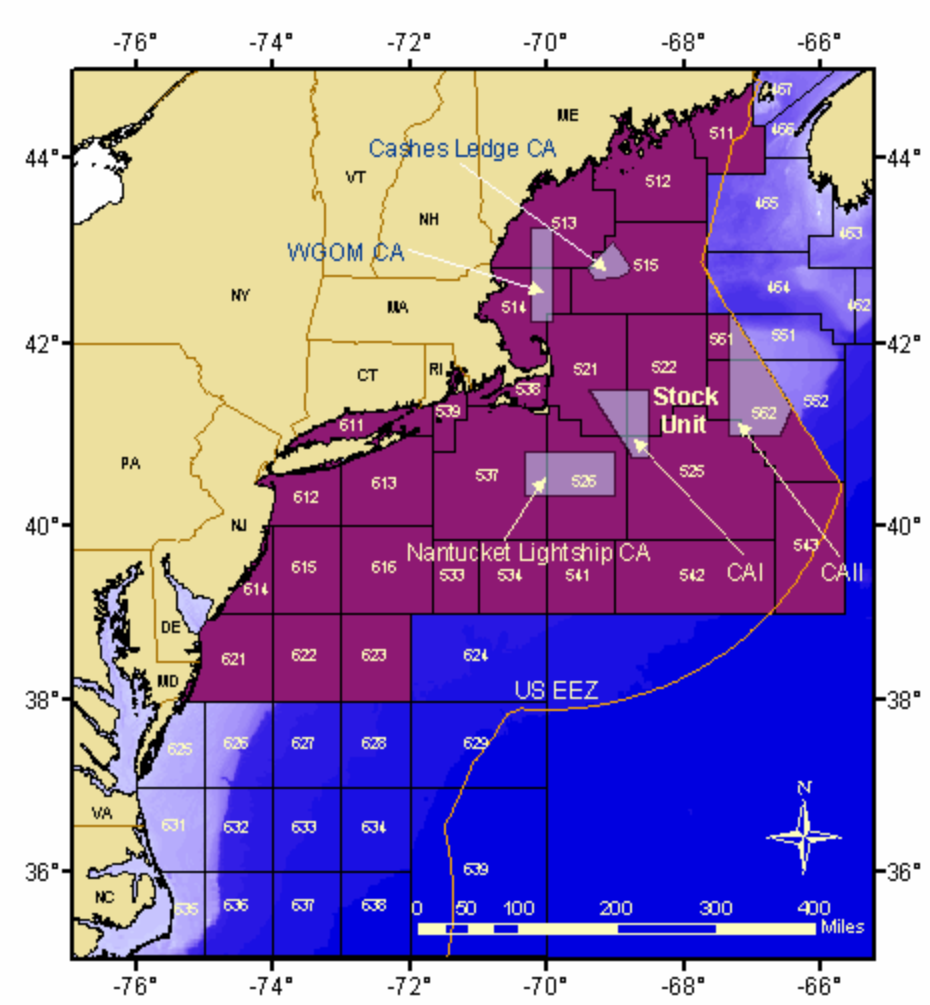


Figure 17.1. Statistical areas used to define the ocean pout stock.

O. Ocean Pout: Landings

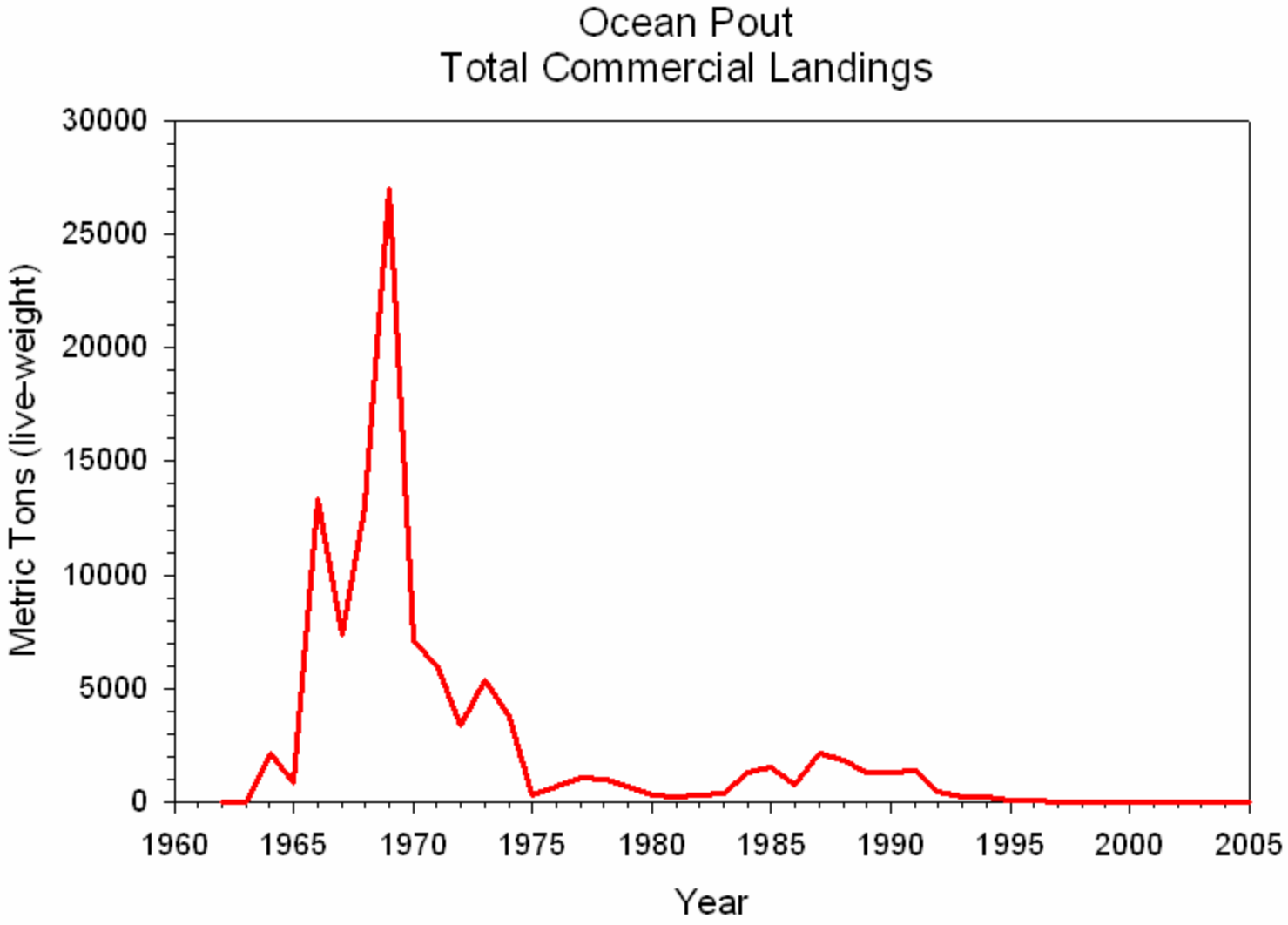
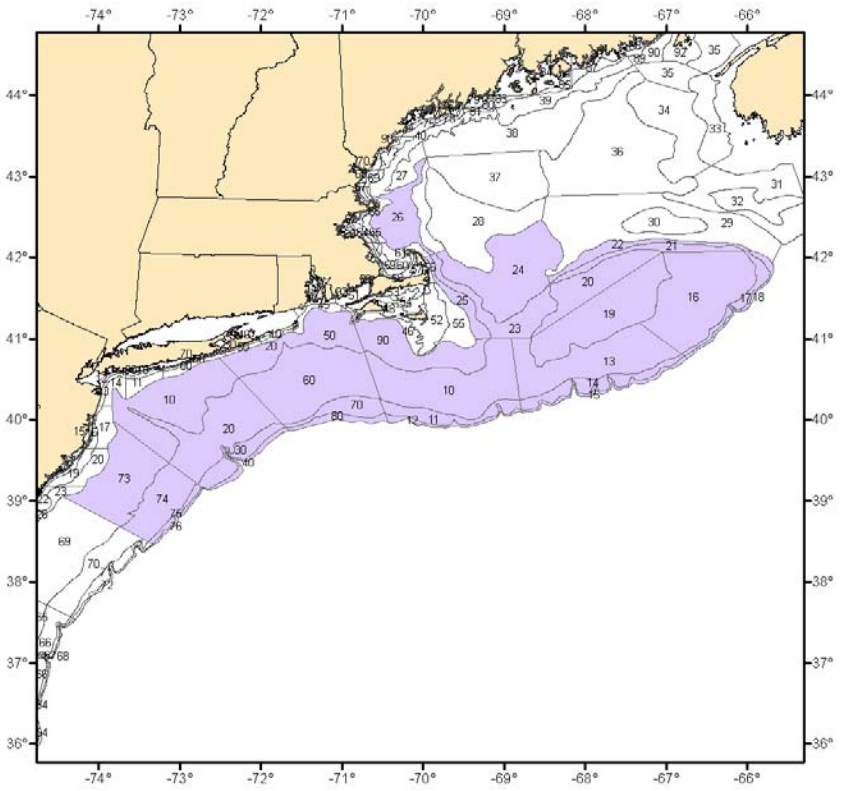


Figure 17.2. Total commercial landings of ocean pout, 1962-2005.

O. Ocean Pout: NEFSC survey



NEFSC offshore strata 1-26; 73-76

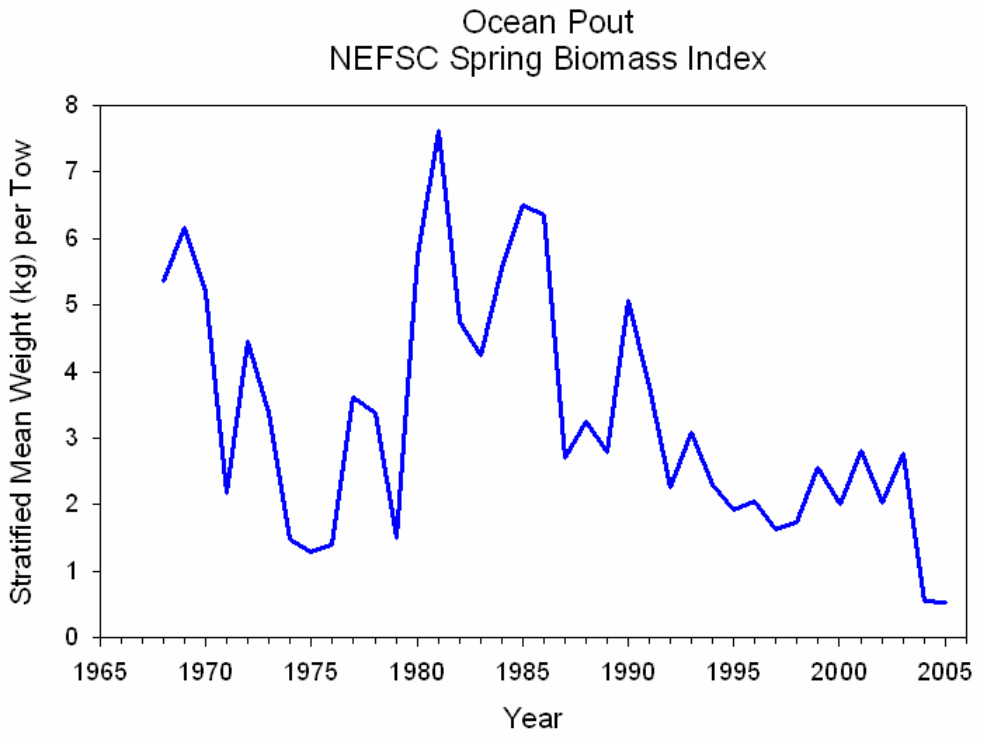


Figure 17.3. Biomass index (stratified mean weight per tow) for ocean pout from the NEFSC spring research vessel survey.

O. Ocean Pout

Biological Reference Points and Stock status

Yield and spawning stock biomass biological reference points are not known for ocean pout.

Biological reference points are survey-based:

Bmsy proxy = 4.9 kg/tow median survey biomass (1980-1991)
MSY = 1,500 mt
Fmsy proxy = 0.31 (1.5/4.9)

In 2004, the 3-yr average survey index was below the Bmsy proxy and the relative exploitation ratio was below the Fmsy proxy.

Ocean pout was in an overfished condition but overfishing did not occur in 2004.

O. Ocean Pout

History of current approach

An index-based assessment has been conducted for ocean pout since 1990 using NEFSC spring survey (1968+) and landings.

Stock status is evaluated using a 3-yr moving average biomass (NEFSC spring survey kg/tow) and an exploitation ratio (landings / 3-yr average spring survey biomass).

In 2002, An Index-base Method (AIM) was explored using the replacement ratio analysis. A weak relationship between replacement ratio and relative F exists, indicating the input data for this species may be imprecise. It was concluded that these analyses were not informative to determine biological reference points.

In 2005 ocean pout was assessed using survey biomass and an exploitation ratio. Discards were estimated for 1989 to 2004.

O. Ocean Pout

Strengths and weaknesses

Long time series of data
Limited biological data are available
GARM 2005 recommended estimating discards prior to 1989

Feasibility of changing assessment models

Changing models will be challenging without additional data
Use total catch (landing + discards) for the exploitation ratio

Proposed Model for GARM 2008

We propose using the same index-based approach used in GARM 2005 (survey biomass and relative exploitation, using total catch).

O. Ocean Pout

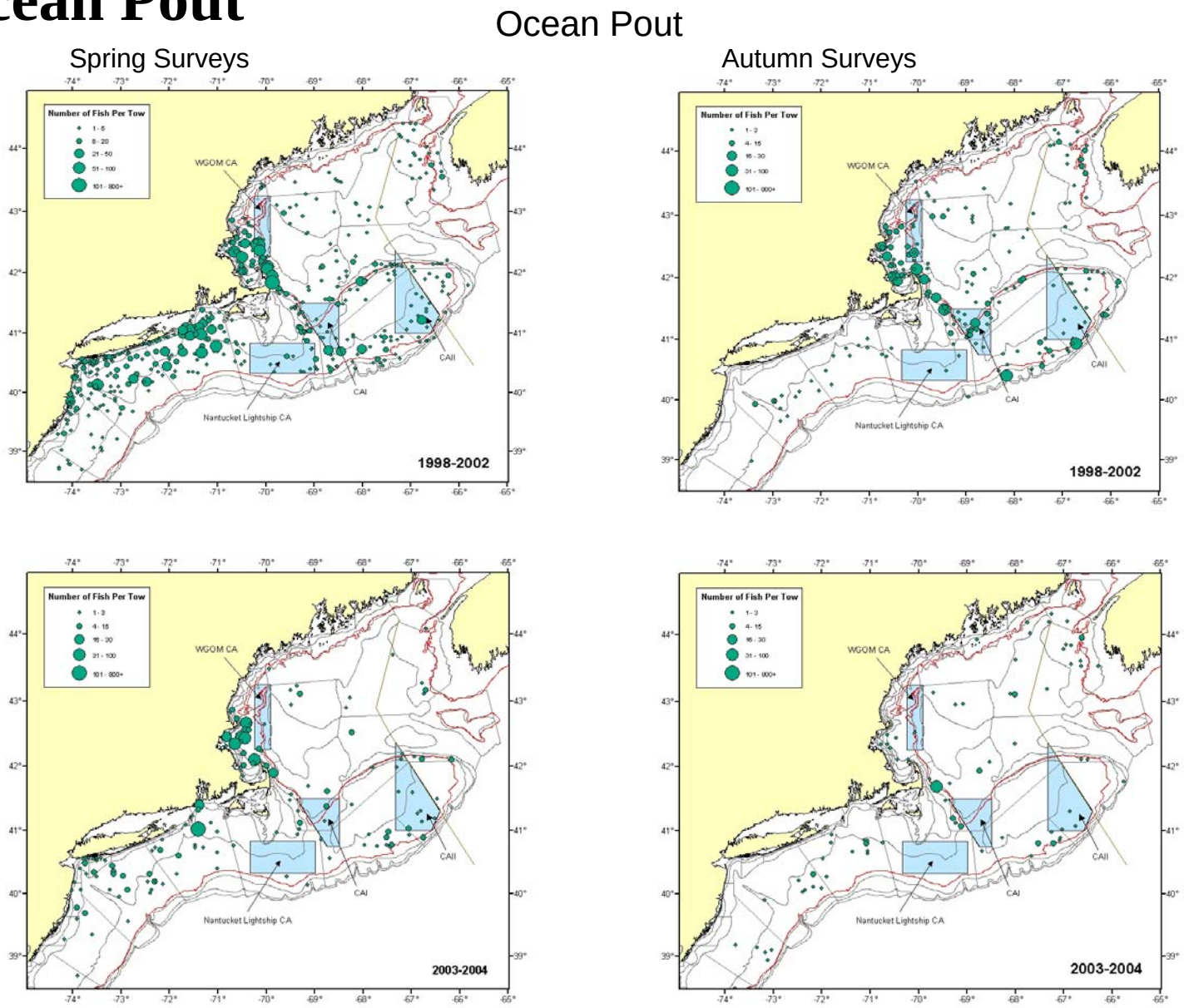
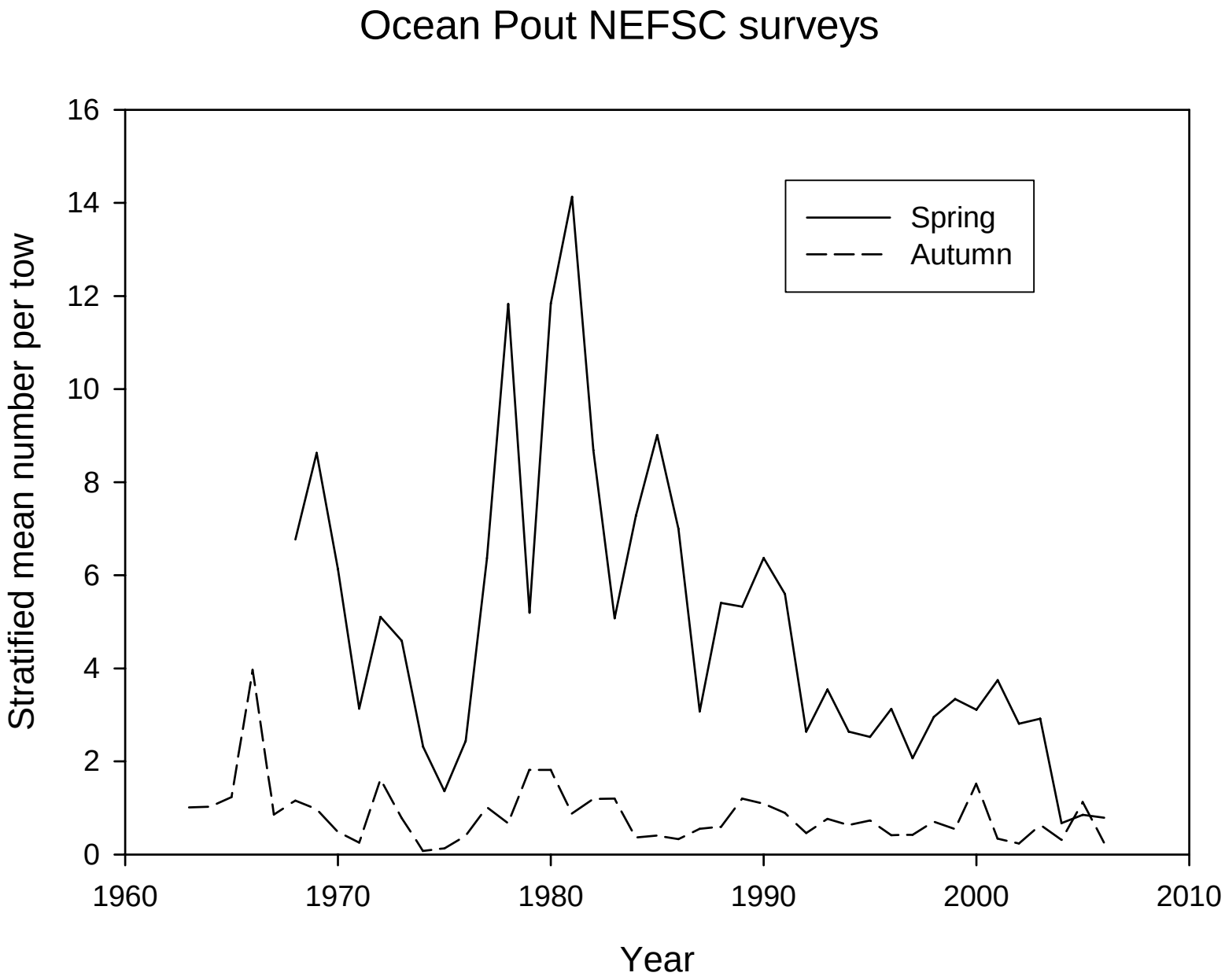
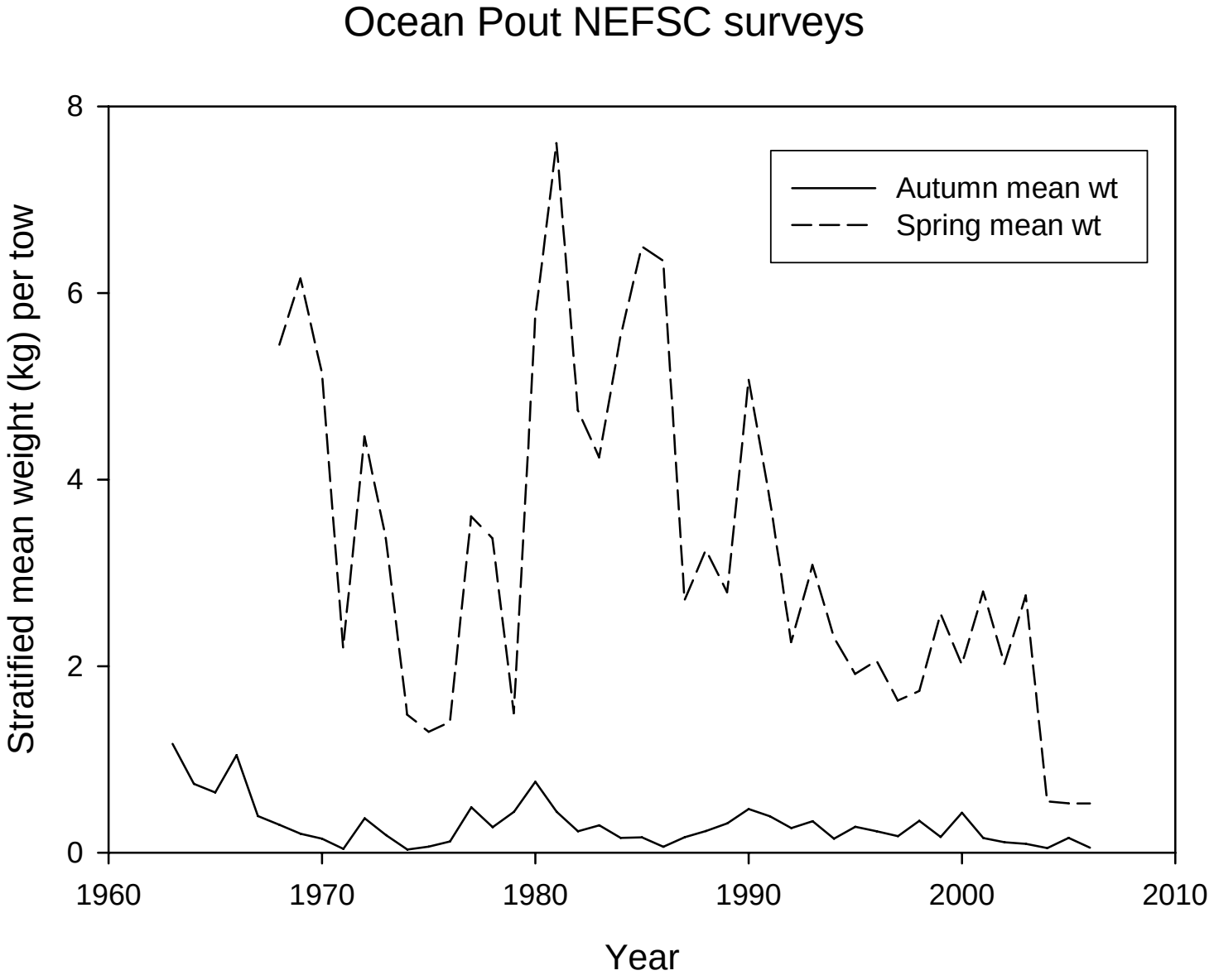
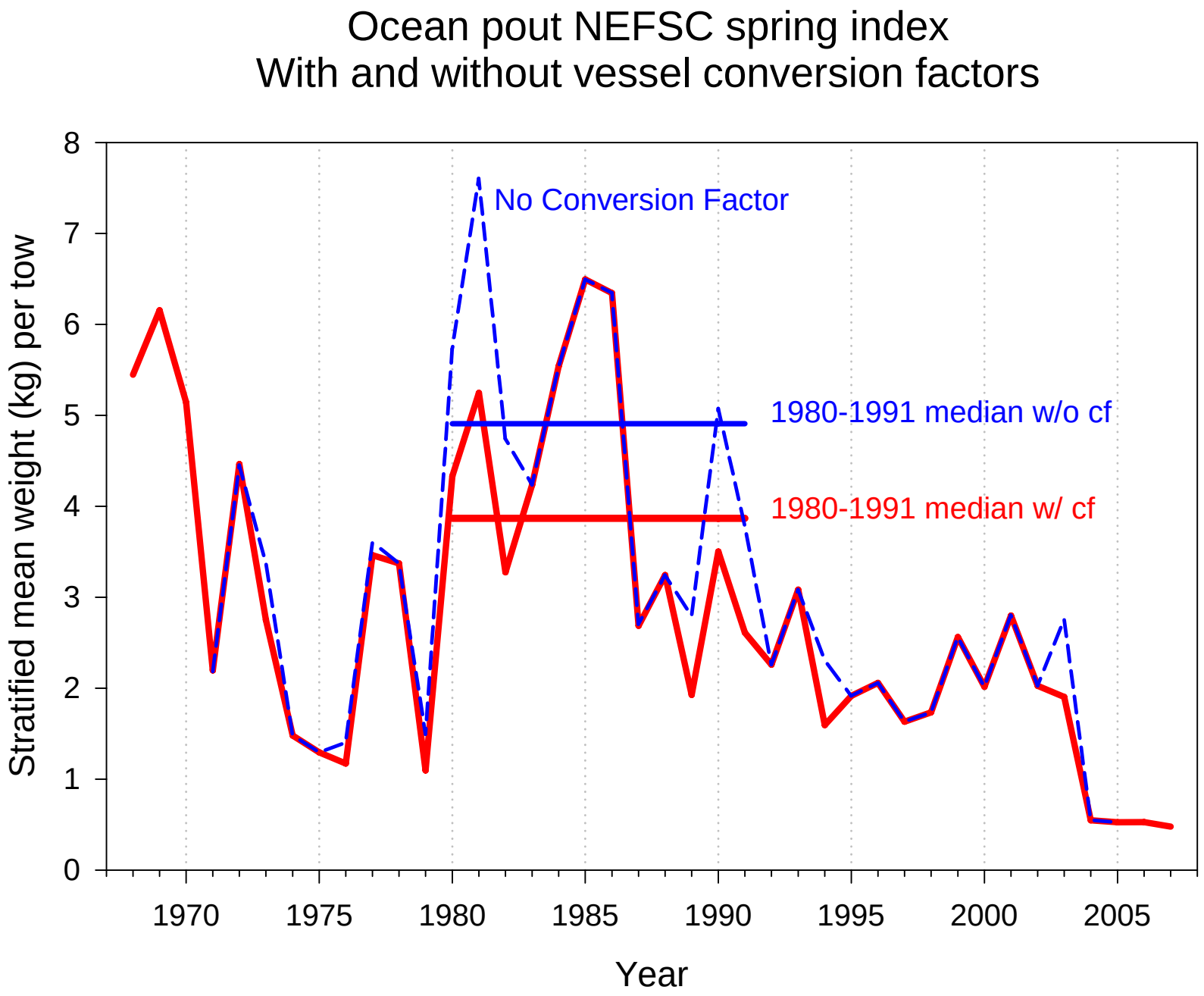
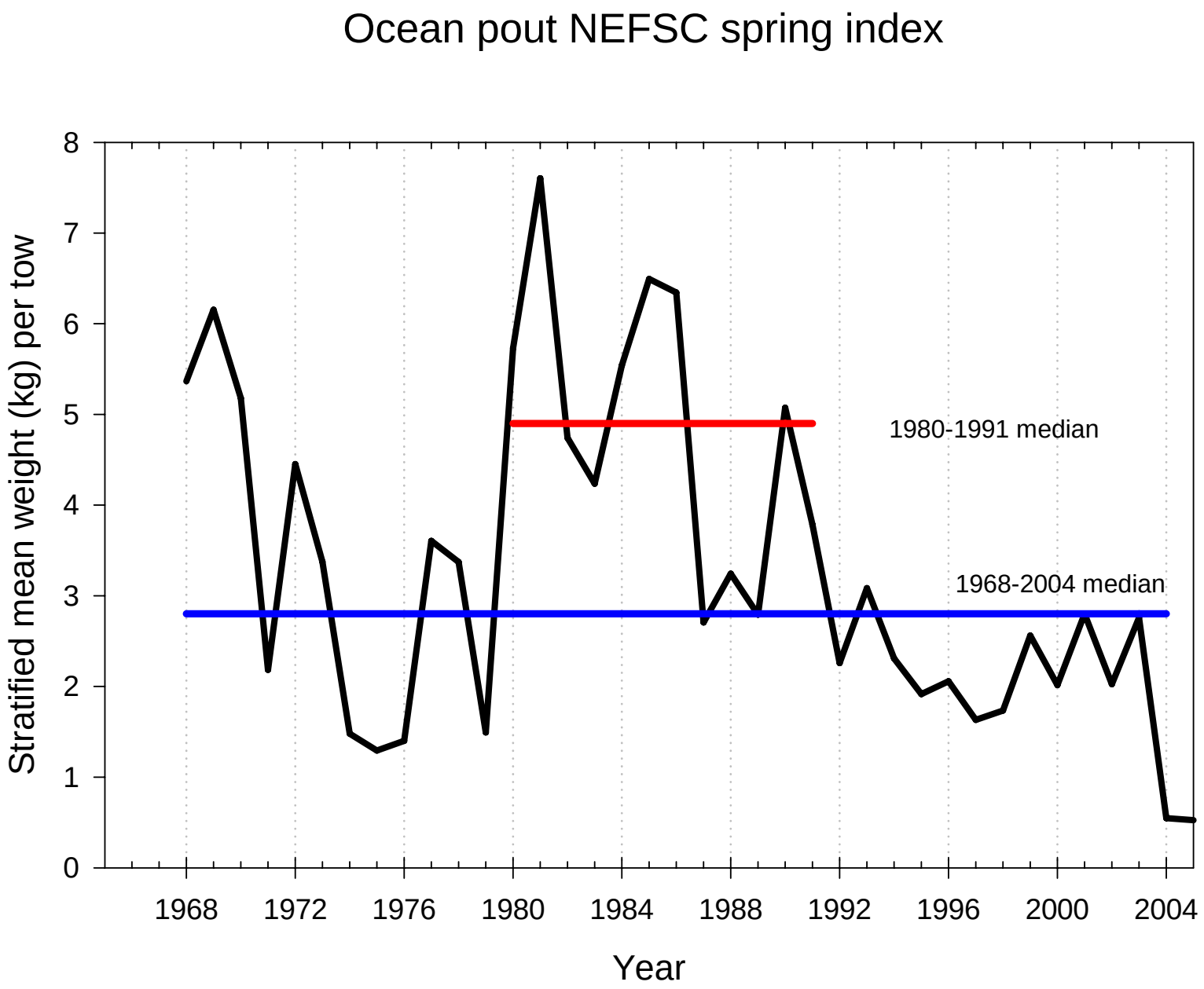


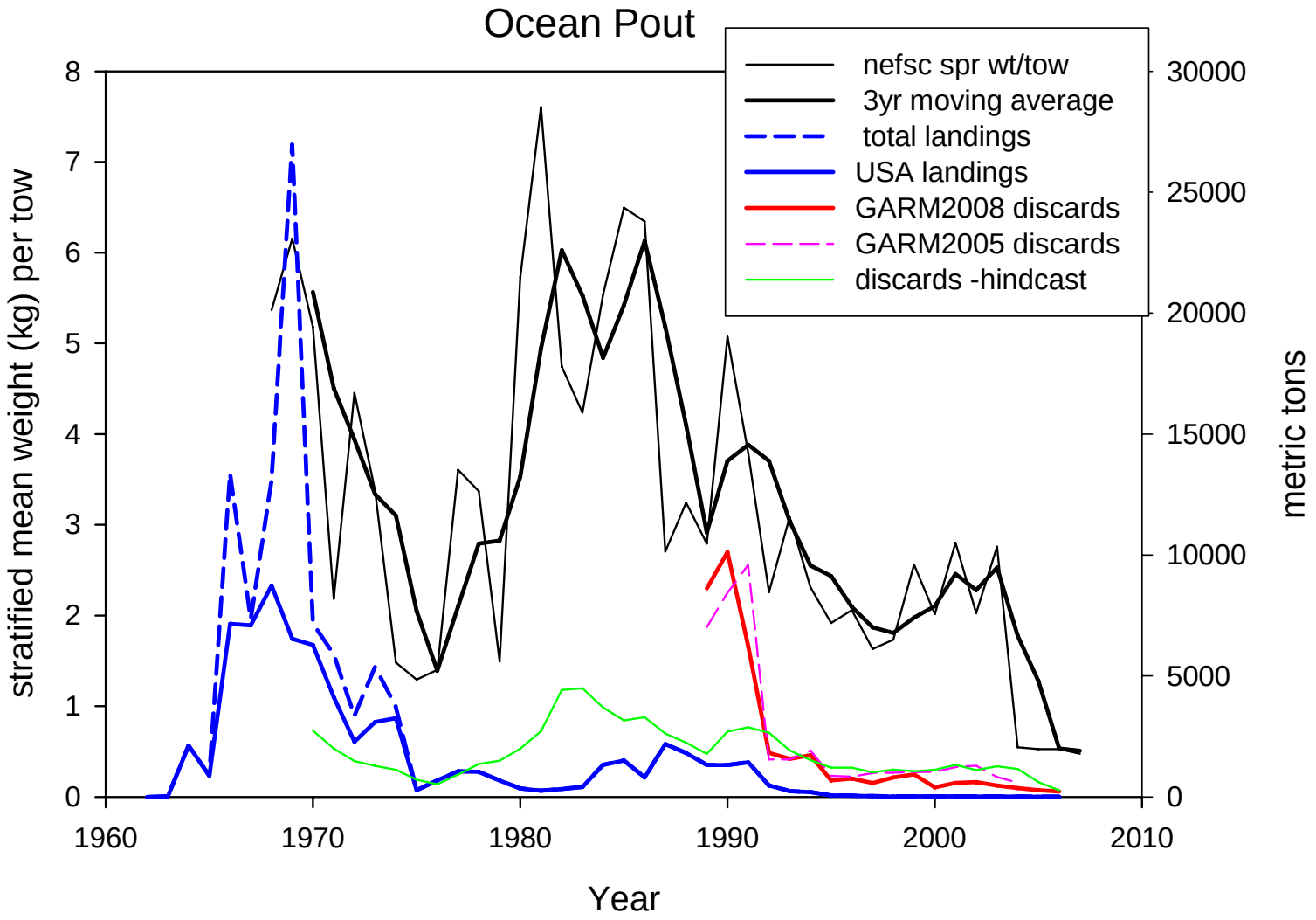
Figure . Distribution of ocean pout in the NEFSC spring and autumn bottom trawl surveys from 1999-2002 and 2003-2004.


Ocean Pout NEFSC surveys
Stratified mean number per tow
Year
Spring
Autumn
0
2
4
6
8
10
12
14
16
1960
1970
1980
1990
2000
2010


Ocean Pout NEFSC surveys
Stratified mean weight (kg) per tow
Year
Autumn mean wt
Spring mean wt
0
2
4
6
8
1960
1970
1980
1990
2000
2010


Ocean pout NEFSC spring index
With and without vessel conversion factors
Stratified mean weight (kg) per tow
Year
No Conversion Factor
1980-1991 median w/o cf
1980-1991 median w/ cf
0
1
2
3
4
5
6
7
8
1970
1975
1980
1985
1990
1995
2000
2005


Ocean pout NEFSC spring index
Stratified mean weight (kg) per tow
0
1
2
3
4
5
6
7
8
1968
1972
1976
1980
1984
1988
1992
1996
2000
2004
Year
1980-1991 median
1968-2004 median



$$\hat{D}_{t,h} = \bar{r}_{c,2004-2006,h} * K_{t,h} * \left(\frac{I_t}{\bar{I}_{2004-2006}} \right)$$